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Education Department Bulletin

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No. 456 ALBANY, N. Y. October 1, 1909

TRAINING CLASS SYLLABUS

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ARITHMETIC

The outline that follows covers the subject-matter of arithmetic which training classes should master. Should previous preparation render it unnecessary to spend much time on the review indicated, the work may be broadened by additional topics and additional mental problems. Emphasis should be placed upon the best method of teaching the topics studied.

I Number
- 1 Concrete
- 2 Abstract

II Notation and numeration
- 1 Arabic
- 2 Roman
- 3 Drill in reading and writing by both the Arabic and Roman systems

III The fundamental operations
- 1 All combinations of the digits
- 2 Development of written processes
- 3 Use of signs and equations
- 4 Applications
  - *a* oral, with practice
  - *b* written, with special attention to forms of explanations

IV Properties of numbers
- 1 Classification
- 2 Tests of divisibility
- 3 Factoring
- 4 Divisors and multiples

V Common fractions
- 1 Explanation and definition of the fraction and fractional unit
- 2 Terms
- 3 Reduction
- 4 Addition, subtraction, multiplication, division, with special attention to development of processes
- 5 Applications

VI Decimal fractions
- 1 Derivation
- 2 Reading and writing decimals
- 3 Fundamental processes developed
- 4 Applications

VII Aliquot parts
- Applications

VIII Denominate numbers
- 1 Tables, common and metric units
- 2 Practical problems
- 3 Measurements and their application
- 4 Longitude and time

IX Percentage
- 1 Principles
- 2 Problems
  - *a* general
  - *b* commission
  - *c* stocks
  - *d* profit and loss
  - *e* insurance
  - *f* taxes
  - *g* duties and excise taxes
  - *h* interest, simple, compound, partial payments
  - *i* discount, true, bank
  - *j* partnership

X Ratio and proportion

XI Involution and evolution
- 1 Powers
- 2 Roots
- 3 Square root
- 4 Cube root
- 5 Applications

Observations and suggestions

The object of the study of arithmetic is twofold: first, utility; second, training.

The work of the first five years should make the pupil familiar with the fundamental operations, common and decimal fractions, and their application to simple problems which fall within the observation and experience of the pupil. As early as the second year problems should be used which apply in concrete form the combinations of numbers already presented. As the work progresses the number of such practical problems should be increased, until, in the fifth year, at least one half the recitation time should be given to the solution of problems. This work should be largely oral. The pupil should first state the problem, then in connected sentences give the solution, with the reason for each step taken.

Problem making should become an important feature. Under the direction of a resourceful teacher pupils will acquire facility in the creation of problems, and in their oral solution. When a pupil presents a problem he should be able to solve it. He should give a clear and complete solution, and at the same time avoid useless repetitions.

The drill work for the first years should systematically cover the combinations necessary to a mastery of the fundamental operations. This work should proceed from the concrete to the abstract, until the pupil can rapidly and accurately perform the operations of adding, subtracting, multiplying and dividing simple numbers, fractions and decimals. Speed should never be attempted at the expense of accuracy, and yet rapidity in the use of numbers should always be sought as essential to highest excellence. Accuracy and rapidity depend on the same concentration of mind as leads to correct judgment upon each step. Oftentimes the greater rapidity of action, the less opportunity for that diversion of thought which results in error. It is an established fact that the most rapid accountants are usually the most accurate. Speed tests in computation by the use of definite time limits should be frequently employed. Practice with number cards and like devices, using two numbers at one time, while of great value, can not take the place of long columns for addition, or of large numbers for the other fundamental operations.

The natural desire of a child for self-achievement should be encouraged. Care should be taken not to do for him what he ought to do for himself. Self-reliance should be stimulated by

encouraging him to work independently in the solution of problems, and by appreciative recognition to successful individual effort. That this course of developing lifters and not leaners may be successful, work must progress only so fast as it can be completely mastered.

There is a difference between telling a pupil how to operate and suggesting how he may learn to operate. The teacher who can give proper suggestions has a valuable asset in his work, but the one who only tells fosters weakness and helplessness in the grades that go far to explain the inability of high school students to master algebra and geometry.

Processes should be developed before rules are called for. Certain "constants" must be memorized for instant use. Among these are the most common aliquot parts, the tables of denominate numbers, and certain values deduced from these tables or from other sources. Among such values are the number of feet in a mile, rods in a mile, square rods in an acre, acres in a square mile, cubic inches in a gallon or bushel, inches in a meter, ratio of circumference to diameter of the circle, or of the square of the radius to the area of the circle.

Denominate numbers should first be taught by the use of actual units in the hands of the pupils, and such use should be continued until accurate concepts are formed.

Diagrams, models of type solids, and tablets representing type surfaces should be used in the solution of problems involving measurements. After pupils have acquired a mastery of the fundamental operations and of the use of common and decimal fractions, only part of the problems in the ordinary textbooks need be worked to secure the numerical result. Time is often given to long operations which might better be used in indicating the necessary steps to be taken in solution, or in concisely telling just how the problem can be solved, and giving the reasons therefor.

Much oral work should be done in percentage, and when percentage problems are thus solved the pupil should ordinarily think of the rate as a common fraction and work accordingly. Thus, in the example: A man sold a hat for $2.25 and gained 12½ per cent; what was the gain? The pupil should see that $2.25 is 9/8 of the cost and give the analysis accordingly.

It is advisable to use but one method of working examples in simple interest. The six per cent method is recommended. Pupils should be drilled to give mentally the interest at six per cent on $1 for any number of years, months and days. When facility in

this is acquired, the working of any example in simple interest is merely a matter of multiplication if the rate is six per cent; and with any other date, the interest should first be found at six per cent and this result increased or diminished as the case may require.

While but one method of work is recommended for an oft repeated process like that of computing interest, yet in many other kinds of problems which can be solved in various ways, pupils may advantageously be asked for more than one solution. A student in finding a number of solutions for a simple problem develops more power than in using the same form of solution for working a dozen similar problems. When various solutions are presented they should be duly compared and preference should be given to that which is most direct.

Take the following example: A man purchased 600 bushels of potatoes at 40 cents a bushel. He sold ¼ of them for 60 cents a bushel, ½ of the remainder for 50 cents a bushel, and the balance for 30 cents a bushel; what was the result of the transactions? In this problem it is natural for a pupil to find the total cost, the three selling amounts, then take the difference between the cost and total amount received. Much the simpler way is to note 20 cents gain on each of 150 bushels, 10 cents gain on each 225 bushels, 10 cents loss on each of 225 bushels.

The advantage of short processes should be emphasized. Pupils should be taught how to test the accuracy of their work. For this purpose they should frequently state and solve another problem whose answer will prove the accuracy of the original work. In the example, What is the interest of $225 for 3 years, 7 months at 7%? A "check problem" would be: If the interest on $225 for 3 years, 7 months is $56.4375, what is the rate?

Most of the work in the metric system should be simple; in the main consisting of changing values from the common to the metric system or the reverse. As a basis for this work the actual units should be placed in the hands of the pupils and by their use the comparative values thoroughly learned.

PSYCHOLOGY AND PRINCIPLES OF EDUCATION

To make psychology of value in the training of teachers, it is necessary definitely to understand its purpose. It does not aim to make skilled psychologists nor to discuss fine psychic theories. It is necessarily brief and elementary. Each step has direct bearing upon the work of the whole course in that it aims to answer

the question *why* in the selection of matter, in method and in discipline. When and how a child is to be encouraged, guided, corrected, is determined in the last analysis by the infallible laws of mind action. A clear, concise knowledge of these laws in their application to the school is the purpose of this study.

To accomplish this, it is necessary, first, to understand the fundamental processes and how they are related, then to make application of this knowledge in the work of teaching.

In acquiring the first result, the student should ordinarily use but one textbook, such supplementary explanation as is necessary being done by the teacher. The reason for this is that in a subject so entirely new and unrelated to previous study, the student is often confused by the differences in nomenclature and in methods of treatment.

The fact as presented must first be clearly apprehended from the text. Too often, however, the topic is dropped at this stage violating the very principle of method for which psychology should show the reason. Next comes the subjective verification. By repeated experiments the student must learn to comprehend and analyze the different states and activities in his own consciousness. He must, for example, out of his own experience, recognize sensation, note the process of judgment, verify the laws of association. If he stops here, he may have a little knowledge of the subject, but he will fail in objective application, and that is the real goal of this work. The third step then is to aim to understand the mental processes of another through one's own activities. It is not enough for the student to determine the elements that enter into his own judgments, but he must learn to analyze the judgment of another with a view to strengthening or correcting it. It is not enough to classify a particular emotion, but it is also essential to know why certain stimuli in the child will arouse certain emotions.

These then — (*a*) textbook exposition, (*b*) subjective and (*c*) objective verification and application — are in their order the three steps in understanding the primal phases of the mind in its various conditions and operations. (*d*) Finally there should be accurate definition based not upon verbal memory but upon the result of the processes above indicated.

The course begins with the study of the intellectual processes; when these are comprehended, the way is open for the consideration of feeling with its attribute of pleasure and pain and for the analysis of the operations that tend toward action.

A Descriptive psychology — mental phenomena

I Knowing

Introduction — relation of mind to body

- *a* dependence of mind upon nervous system
- *b* elements of nervous system
- *c* function of nerves, spinal cord, cerebellum, cerebrum
- *d* afferent and efferent nerves — reflex action
- *e* the senses
- *f* "reaction time"

Presentative faculties

1 Sensation

- *a* physical factors
- *b* psychic factors
- *c* sensations classified as to (1) kind — organic and special, (2) degree of intensity — Weber's law
- *d* possibility of pure sensation
- *e* result of loss of sensation

2 Perception

- *a* prehensive element — dependence upon immediate sensation
- *b* apprehensive element — dependence upon past sensation
- *c* percept

Representative faculties

3 Memory and imagination

- *a* relation of memory to (1) the senses, (2) percepts
- *b* powers involved in memory: (1) retention, (2) reproduction, (3) recognition
- *c* formation of images — distinction between image and percept
- *d* constructive imagination — its possibilities and limitations
- *e* idea defined and compared with percept

Elaborative faculties

4 Conception — first step in thinking

- *a* the several processes involved in conception: (1) presentation, (2) comparison, (3) abstraction, (4) generalization, (5) denomination

b its relation to perception and memory
c concept defined and compared with percept and idea
d how words get their meaning — making a vocabulary

5 Judgment — second step in thinking
a sources of material for judgment
b process of judgment — comparison of ideas
c the proposition — its elements

6 Reasoning — third step in thinking
a judgments furnish material
b processes: (1) inductive, (2) deductive — value of each, their interrelation
c the syllogism — in parts
d reasoning by analogy — its advantages, disadvantages

II Feeling — passive compared with knowing, active; an effect due to the presence of its appropriate object

1 Attributes of pleasure and pain — their purpose in life
2 Intensity of feeling dependent upon intensity and duration of stimulus
3 Caused by
a peripheral excitation
b idea
4 Emotions and simple feeling — relation analogous to that between perception and sensation
a presence of idea in emotion
b kinds of emotion: (1) egoistic, (2) altruistic, (3) intellectual, (4) esthetic, (5) moral, the last three being called sentiments

III Will — "the attentive guidance of our conduct"

1 Desire — its relation to
a feeling
b intellect
2 Deliberation — its basis in experience; its relation to judgment; its significance
a subjectively — doubt
b objectively — hesitation
3 Decision — its relation to feeling and to reason
4 Action voluntary — compared and contrasted with the several forms of involuntary action
a reflex
b impulsive
c instinctive

To this point the course concerns itself with the demarcation and definition of the different mental phenomena. Now emphasis should be laid on (*a*) the mind's complexity of operation and (*b*) the unity of mind. In the simplest operation many states are involved. Knowing, feeling and willing can not be isolated from each other, or from their physical concomitants; nor even any one phase of these from all others. Therefore, the work should now be reviewed and intensified by showing this complexity — for example, how a simple act of perception embraces emotion, volition, and even memory, judgment and conception.

The way is then made clear for comprehending the entirety of consciousness in its duration and degrees of intensity.

A[1] Descriptive psychology — the mind a unit

Introduction — consciousness

1 Its definition based on the previous study

2 The resultant definition of psychology

3 Conscious and subconscious states in their relation to memory; "threshold of consciousness"; unconsciousness

Knowing prominent

I Attention — "focusing of consciousness"

1 Dependent upon
- *a* physical condition
- *b* quantity and quality of stimulus

} laws governing attention

2 Kinds
- *a* reflex
- *b* voluntary — its relation to will

3 Observation — a series of connected acts of attention
- *a* perceptual element
- *b* attention involving will — arousing interest
- *c* interpretation of elements perceived
- *d* observation and experiment — new element in the latter

II Interest — an emotion — how it affects attention

1 Kinds
- *a* natural
- *b* acquired

} their relation to sensation, memory, judgment etc.

2 Relation of will to interest

III Association of ideas — impossibility of an isolated idea
- 1 Relation of association to memory, to thought
- 2 Laws of association
  - *a* association by contiguity
  - *b* association by similarity or contrast

IV Apperception — "Association is one form of apperception; thinking another"
- 1 Determined by
  - *a* experience
  - *b* perception
- 2 Effect upon thinking, action and feeling

V Intuition — intuitive and deliberative judgments compared as to
- 1 Process
- 2 Frequency
- 3 Use

Feeling prominent

VI Physical concomitants of feeling, emotion, sentiment
- 1 Muscular
- 2 Nervous

Will prominent

VII Habit
- 1 Its physical factors — relation to activity of muscles and nerves
- 2 Its psychic factors — relation to knowing, feeling and willing
- 3 Laws of habit

VIII Character — "Character is known by conduct and conduct is the result of habit"
- 1 Conduct — relation to habit
- 2 Moral judgments
- 3 Phases of development
  - *a* instincts
  - *b* imitation
  - *c* will

The above divisions aim to give a clear elementary knowledge of how the mind works. But for the teacher this is not enough.

He must know what mental phenomena are most prominent in the child's life at a particular age and stage of development if he is to direct intelligently the child's education.

B Genetic psychology — order and stages of development

Introduction — a special form of descriptive psychology modified by laws of growth

I Factors in development

1 Influence of heredity
2 Environment
  a physical
  b social
3 Fundamental capacity

II Order of development through

1 Infancy
2 Childhood
3 Youth
4 Adolescence
5 Maturity

} Trace — with reference to their beginning, growth and period of greatest power — the different phases of knowing — as perception, memory and judgment, of feeling and of willing

When the student understands mind in its processes and its unity, and child mind in its growth, he is ready to apply what he has learned, *as principles of education,* to the art and science of teaching. This fundamental knowledge with its genetic attributes gives direction to the two forces of school work — instruction and discipline — which, though their separation is more apparent than real, may be better understood by separate consideration.

The teacher, in planning the new lesson, divides it into the conventional parts — preparation, presentation and application — or possibly into "the five formal steps." The exact division is not material but it is of consequence that he sees to it that each step finds its sanction in the laws of mental process. He may use "apperception," for example, in accounting for the work of preparation, but unless he understands the elements of apperception, it may be only a cloak for concealing ignorance that might better be laid bare. In a review lesson, why is the method different? This question must be answered in terms of results to be obtained which are to be approved only as they accord with the normal processes of mind.

In discipline the problem is similar. There is a difference in strength and quality of emotion and will, determined by the nature, period of growth and surroundings of every child. What will inspire a sluggish mind, what correction is best for a particular case of disorder, what is the value of reading to a class Shelley's *The Cloud* or of placing on the wall a copy of Millet's *Angelus?* — these questions have their answers grounded in psychology.

The power to solve such problems of instruction and discipline is the particular aim of this course.

C Principles of education

Introduction — The order in which the powers of the mind develop determines what to teach, when and how to teach it.

Physical factors

1 Schoolroom comfort
2 Exercise and play
3 Rest and fatigue — in their bearing upon attention

I Instruction

1 Course of study — selection of subject-matter according to its value for training and development in natural order, e. g.
   a observation — nature study
   b memory — logical and verbal, in literature, number
   c imagination — fairy stories, myths compared with history and geography
   d judgment — accuracy conditioned by (*a*), (*b*), (*c*)
   e reason — when it should be relied upon — tracing of cause in mathematics, history
2 Recitation
   a presentation of new material
   b review
   Analysis of different mental processes involved according to the subject, and the maturity of the class

II Discipline — Its immediate aim is educational process; its ultimate aim, character

1 How its aims are promoted through physical factors, course of study and recitation
2 Special consideration of cultivating the emotions. Every emotion has its function in life

a how the emotions are related to subjects in the course of study — poetry, number etc.
b inhibition of emotion

3 Imitation — personal factor — influence of the teacher
4 The will — character, a completely fashioned will
a value of habit
b defects to be overcome
c training according to order of growth

"The formation of character underlies the cultivation of all the powers of the mind."

SCHOOL MANAGEMENT

The term school management as used in this syllabus is a comprehensive one. The topics named below indicate its scope. Examinations in this subject call for a knowledge not only of the organization of the school, the control of pupils, and the management of classes, but also of such important topics as school hygiene, the appointments of school buildings, and the equipment of the school.

While such matters as the construction of the school building, the mode of heating, and the arrangement of windows are provided for by other persons than teachers, it is, nevertheless, important that teachers know correct standards to the end that they can intelligently call attention to unsatisfactory conditions and especially that they may be able to make the best use of the appointments provided. It is altogether too common to find a building furnished with adjustable seats that are not adjusted to fit the pupils occupying them, seats improperly placed in the room, the room overheated and window shades improperly adjusted. Throughout the course the members of the training class should be led to observe the conditions in the school with reference to such matters. It is not enough that the theory be presented. Frequent reports should be required on existing conditions. It is as important, likewise, that members observe and discuss the cleanliness of the floors, desks and shelves, the general tidiness of the room and the care of the school equipment, as it is to observe and discuss methods of teaching lessons. The responsibility of the teacher for ascertaining precisely what equipment is available and for making proper use of such equipment should be impressed.

While no one textbook now published covers adequately all the topics mentioned below, as a rule, the attempt should not be made to instruct a training class in this subject through lectures and discussions alone.

The management of the school is essentially a matter of administration. It requires what is commonly known as executive ability. The teacher must make his action fit conditions. Personality counts for a great deal. Decision of character and good sense must be in evidence. The handling of a class requires something more than a knowledge of the subject to be taught and the methods of presentation, as important as these may be. The management of a school should be in accordance with the laws of the mind, but these laws are to be learned in the study of psychology rather than in the study of school management.

Method in general should be considered but not methods of teaching particular subjects. Proper emphasis should be given to the importance of the recitation. At the same time the need of training pupils to prepare themselves for their recitations should be emphasized.

I Grounds

Surroundings — desirable and undesirable. Size, character and soil drainage. Means of beautifying. Use. Care. Teachers' responsibility

II Building

Size and shape of schoolroom. Standards of floor surface, air space, and lighting. Methods of heating and ventilating. Effects of improper lighting, heating and ventilating. Proper seating — size of seats, position, distance apart, adjustment. Blackboards — hight, color, character of surface, material, extent, crayon, erasers. Teachers' responsibility

III Decoration of rooms

Tinting of walls. Suitable pictures — appropriate size, framing, hanging. Other decorations — casts, vases, plants. Attention to tidiness and general arrangement of the furnishings of the room

IV School hygiene

Relation of bodily conditions to mental work. Rest periods. Recesses. Calisthenic exercises — use and abuse.

Posture. Color and adjustment of shades. Regulation of temperature of the room. Avoidance of drafts. Drinking water. Toilet accommodations. Home study. Eyesight in relation to school life. Diseases that concern the school. Dangers of dust. Daily attention to cleanliness

V **Equipment**

Library and apparatus. How to secure each; proper use of each; means of caring for each. Inventory of books and apparatus. Teachers' responsibility

VI **Relation of the teacher to the community and its educational interests**

Means of interesting the community and securing cooperation

VII **Organization**

Characteristics: simple, definite, systematic, practical. Importance of a good beginning. Preparation for first day of school. Registration of pupils. Seating of pupils. Assignment of work. Tentative program. Beginning work promptly

VIII **Mechanical routine**

Passing in and out of the room. Passing to and from classes. Distribution and collection of materials. Location and care of wraps. Orderly arrangement of books and materials in desks. Signals. Proper use of blackboards. Leaving seats. Leaving room. Limitations of mechanical routine

IX **Recess**

Importance. Time of day. Free play versus calisthenic exercises. Use of marching in schoolrooms — cautions. Supervision of play and playground

X **Attendance**

Means of securing regularity and punctuality. Excuses. Reports to parents. What constitutes necessary absence and tardiness

XI **Registers, records, reports**

Importance of accuracy, completeness, preservation. Forms

XII School government

Aims of discipline. Necessity of authority. Proper characteristics of authority. Influence of personality of the teacher; the value of the voice, the eye and other such factors in the control of the school. Conditions of easy control. Pupils' self-government. Rewards and punishments — proper and improper. Consideration of particular classes of cases likely to arise

XIII Programs

Factors involved in making a program. Relative importance of various subjects. Relation of subject-matter to fatigue. Position of subjects on the program. General exercises. Number of classes. Correlation of studies. Typical graded school program. Typical ungraded school program. Importance of holding closely to program adopted. Study program. Recitation program. Relative time given to study and recitation. Preparation of tables showing weekly time allotment (study and recitation) for each subject of the course expressed in minutes: (*a*) in graded school, (*b*) in ungraded school. Reasons for and objections to dismissing younger pupils early

XIV The recitation

1 Its extreme importance, especially in lower grades

2 Importance of definite purpose and teacher's special preparation for each recitation

3 Aims of the recitation — variously considered

4 Means of arousing interest and of holding attention

5 The assignment of the lesson: time, purposes, manner

6 Preparation of the lesson

A regular time for preparation. Planning for the study period. Supervision of the study period. Teaching how to study, especially in intermediate and higher grades

7 Five formal steps of the recitation: preparation, presentation, comparison, generalization, application. Characteristics of each step. Limitations of the fivefold division of the recitation. Practical hints

8 General characteristics of inductive and deductive teaching. Knowledge of the terms: analytic, synthetic; objective, subjective; empirical, rational

9 Particular or individual methods

Lecture, question, Socratic, topic. Advantages and limitations of each

10 Oral and written work in recitation. Advantages and limitations of each. Frequency of written exercises. Tendency to an excess of written work in both the preparation and the recitation of lessons

11 The art of questioning. General purposes of questioning. Avoidance of overquestioning. Character of questioning in lower grades, in upper grades. Kinds of questions and special purpose of each. Faulty questioning

12 Length of the recitation in the several grades and subjects. [*See* outline under XIII Programs]

13 Importance and limitations of drill. The material for drill

14 The unprepared pupil

Reasons for lack of preparation. Treatment of the unprepared pupil

15 Recitation waste

Need of constant watchfulness. Rights of the class versus the rights of the individual. Enlisting the cooperation of all members of the class; means employed

16 Individual instruction

When, where, why and how given

XV Textbooks and syllabuses

Uses and abuses of each

XVI Results to be tested

1 Efficiency in habit building: seen in movements and posture of pupils, line-movements of the class, written work, blackboard work, speech, dress, cleanliness, accuracy and rapidity of execution

2 Knowledge: oral examination, written examinations: character of each, relative advantages of each, frequency of each. Proper manner of conducting written examinations, length, in what grades to be given, rating of papers. Commissioners grade examinations

3 Power of application: relative importance; suitable tests in application of knowledge

Reference books

Bagley, William C. Class Management.
Baldwin, Joseph. School Management and School Methods.
Burrage & Bailey. School Sanitation and Decoration.
De Garmo, Charles. Interest and Education.

Hamilton, Samuel. The Recitation.
Hinsdale, B. A. The Art of Study.
Landon, Joseph. Principles and Practice of Teaching and Class Management.
McMurry & McMurry. The Method of the Recitation.
Newsholme, Arthur. School Hygiene.
Rowe, Stuart H. The Lighting of Schoolrooms.
Sabin, Henry. Common Sense Didactics.
Seeley. New School Management.
Shaw, Edward R. School Hygiene.
White, Emerson E. School Management

ENGLISH

No more difficult problem confronts the teacher of English in the training class than that of proper time allotments, for subject-matter, methods and the review of the leading principles of grammar and rhetoric. In the absence of specific directions, there has been a tendency to overemphasize formal grammar and rhetoric to the neglect of matters more fundamental — a tendency that would be more excusable if rural teachers were mainly concerned with teaching the grammar grades.

It is suggested that from one quarter to one third of the time should be used in gaining first-hand acquaintance with the literature assigned for appreciative reading, the memory gems, the supplementary reading and with that recommended for grade libraries. In this reading the emphasis should be laid upon the subject-matter itself, the consideration of its value to the grade in which it is studied and its adaptability to that grade.

The teacher should keep in mind that there are three distinct purposes in this study of literature: first, the power to appreciate a masterpiece; second, the unconscious development in the child of a better quality of thought; third, the formation of ideals of expression.

The time for this work is brief. Therefore, a large portion of the reading must necessarily be cursory but there should be an intensive study of a few selections with careful notetaking.

One third of the time may well be given to a study of general and special methods applying well recognized principles of psychology. To be of much value each step in this study must be exemplified by observation lessons and plan work.

From one quarter to one third of the time may properly be given to a review of analytic grammar, elementary rhetoric, and practice in composition work.

Theoretically, it is more pedagogical to carry on these three lines of work together; practically, it will be found expedient to carry on the first two lines together and postpone the third to the latter part of the term; otherwise, many teachers will find that they have neglected the more important work for the less important.

It is recommended that students keep carefully written notebooks, prepared by themselves, not dictated by the teacher. If loose notes are first brought to the class and there criticized before they are entered in the permanent notebooks, valuable habits of composition may be formed. The purpose of this notebook is not to give students fixed forms to follow in their teaching but to form in them habits of helping themselves when they shall have entered upon their work.

These notebooks might contain among other things the following:

1 A list of books read with comments on the value of each and the use to be made of each

2 A list of selections chosen for reading to the pupil

3 A list of books adapted to home reading

4 A list of stories easily dramatized

5 Plans for observation lessons

6 Plans for reproduction exercises[1]

7 Plans for oral composition based on experiences

8 Adaptations and condensations of stories for telling

9 Model sentences to be used for copying

10 Model letter forms to be used for copying

11 Model paragraphs for dictation exercises

12 Plans for memorizing

13 Pictures suitable for use in composition classes

Throughout the work the following fundamental principles and cautions deserve emphasis:

1 That in teachers training classes more attention should be given to the work outlined for primary and intermediate grades than to that outlined for grammar grades.

2 That the child has much to say concerning his own experiences and the events that occur in his world.

3 That the English teacher should seek to improve the child's power to express his thoughts and feelings.

4 That the ability to express thought and feeling is acquired largely by imitation.

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[1]It should be carefully noted that paraphrasing is not a kind of reproduction exercise recommended in this syllabus.

5 That imitating good models found in literature is effective in acquiring the art of expression.

6 That frequent repetition of correct forms promotes good habits.

7 That the study of English should give culture as well as discipline; therefore, the pupil's mind should be nourished and stimulated by contact with literature of power and beauty.

8 That by memorizing passages of good literature, the pupil becomes possessed of good thoughts, acquires standards by which to judge of literary values and gains a purity and precision of expression.

The following outline of study is suggested:

I Primary grades

1 The literature recommended for use in the primary grades (*a*) for the teacher, (*b*) for class use, (*c*) for home reading

2 Oral composition

a observation lessons: their meaning, nature and use; suggestive plans

b experiences: what kind of experiences can be used for oral compositions; suggestive plans

c reproductions: their basis; value; use in securing logical thinking, in teaching oral paragraphing; suggestive plans

d silent reading: its value as a basis for oral composition work

e pictures for composition work

3 Written composition[1]

a copying of models; suggestive models

b dictation exercises; suggestive models

4 Drills

a the kinds of drills suitable for primary grades; oral drills; written drills

b suggestive list of drills; plans for drills

5 Story-telling

a its value as a recreation; as a basis for reproduction work

b the characteristics of a good story for primary grades

c condensation of long stories for small children

d suggestive list of suitable stories

[1] Rules and reasons are not to be employed. Depend upon correct practice.

6 Dramatization
- *a* its value direct and indirect
- *b* the kind of selections readily dramatized
- *c* suggestive list of selections for dramatization

7 Class reading: a review of the Training Class Syllabus of reading

8 Memorizing
- *a* how memorizing is best secured
- *b* the value of memorizing
- *c* list of suitable selections

9 The aims and limitations of English teaching in primary grades

II Intermediate grades

1 The literature recommended for use in the intermediate grades: (*a*) for the teacher, (*b*) for class use, (*c*) for home reading, (*d*) means of securing good literature through the purchase by the district and State duplication and by traveling libraries

2 Home reading: its value; how secured

3 Oral composition
- *a* list of materials that may be used as a basis for oral compositions (*see I, 2*)
- *b* correlation of composition work with nature study, geography, school decoration, history and hygiene
- *c* kinds of oral composition work: [1] narration, description and exposition based on models from good literature
- *d* reproduction: the kinds of material best suited for reproduction work from stories; from home reading
- *e* incentive to oral composition: stories told by the teacher; selected passages read in class; the use of the newspaper and current topics; pictures; reports of games, excursions, visits
- *f* the relative values of written and oral compositions; the danger of an excess of written compositions
- *g* plans for oral composition work

[1] These should be taught wholly by practice under guidance of the teacher. Children of intermediate grades should not be drilled in analytical rhetoric.

4 Written composition
   a model paragraphs for copying — narrative, descriptive, expository
   b model dictation exercises
   c model letter forms
   d development of written paragraphs after the same have been developed orally
   e combination of paragraphs into simple but complete compositions, giving particular attention to logical sequence
   f suggestive list of topics to be assigned for letter writing
   g methods of correcting written work
   h evils resulting from paraphrasing
5 Drills
   a a list of drills recommended for intermediate grades
   b plans for drills
   c how much time should be spent in drills
6 Use of library
   a the use of indexes, dictionaries and reference books
   b how the use of the school library may be encouraged for reference; for home reading
7 Story-telling and reading to the class
   a the special value of these exercises
   b suggestive list of stories and readings
8 The vocabulary
   a how built up
   b what intermediate pupils should learn from the dictionary
9 Class reading: a review of the Training Class Syllabus of reading for intermediate grades
10 Informal grammar
   a the classification of words, phrases, clauses and sentences
   b the discovery of grammatical rules and their application
   c lesson plans for teaching classifications
   d lists of oral exercises in synthetic grammar
   e lists of written exercises in synthetic grammar
   f lesson plans
11 The aims and limitations of intermediate English teaching

III Grammar grades

1 Literature: selections from the literature recommended for the grammar grades
- *a* for the teacher
- *b* for class reading
- *c* for home reading
- *d* records of home reading; their value
- *e* the use of the school and public libraries; how encouraged

2 Oral composition
- *a* continuation of narration, description, exposition and characterization begun in the intermediate grades
- *b* paragraphs based upon material supplied by nature study and agriculture, geography, history and literature
- *c* the combination of paragraphs into simple but complete compositions having "a clear beginning, a related middle and a definite close"
- *d* debates and discussions
- *e* plans for oral compositions
- *f* lists of suitable subjects for oral compositions

3 Written composition
- *a* study of choice selections of description, narration, exposition and characterization and their use as models for original work
- *b* list of suitable short selections of different kinds of composition
- *c* simple compositions based on previous oral work
- *d* compositions based on imagined observations and experiences; suitable topics
- *e* how to secure unity, emphasis and coherence
- *f* business and friendly letters
- *g* compositions in topics from the assigned literature[1]

4 The vocabulary
- *a* how increased
- *b* what grammar grade pupils should learn from the dictionary

5 Drills — to be given as need is disclosed by class work

[1]Paraphrasing should be avoided.

6 Reading
- *a* the necessity for continuing reading through the grammar grades
- *b* how the aim in grammar grades differs from that in the lower grades
- *c* the value of declamation and of appreciative reading

7 Grammar with textbook
- *a* review of classifications of words, phrases, clauses and sentences
- *b* inflections regular and irregular
- *c* analysis and synthesis of sentences
- *d* correction of common errors
- *e* synonyms

8 Tests
- *a* the use and abuse of written tests
- *b* the value of the regular daily exercises in determining promotion
- *c* the filing and preservation of daily work
- *d* regular written reviews
- *e* the uselessness of teaching for final examinations

HISTORY OF EDUCATION

Education is more than schooling. The history of education is more than the history of formal institutions of learning. To be much benefited by a course in the history of education a student must be somewhat familiar with the general religious, social, political and industrial ideals and practices of the people studied. Only such factors of individual or national life, however, should be considered in this course as have a direct influence in promoting or retarding progress toward higher educational ideals.

The student should be led to see how the individual, from the conflict of social forces, has ever been discovering and giving expression to new ideals that have in time moved the mass of mankind from its customary mode of life. Although these ideals have been wrought out only as they have become the possession of the mass, yet educational progress has always been initiated by the individual. The social group is the conservative force. Traditional notions are overthrown through the effort of the individual mind. The study of the history of education should, therefore, largely

center about the few great educators who can properly be called leaders.

Throughout the course, such topics as the following should be kept in mind: the estimate placed upon the position of the teacher by the public, and its explanation; the compensation of the teacher; the control and support of schools, whether public or private; the spirit of discipline; compulsory education; the classes of society enjoying the privileges of teaching institutions; steps toward universal education; the position of women; the progress of individualism. Such topics do not belong to any one period or country alone. It is well to look throughout the past for the presence or absence of current educational standards, that is, to compare the present with the past, in order to appreciate the full significance of present theory and practice. The changes from one phase of educational thought to another are less abrupt than syllabuses and textbooks would indicate. Students should be led to see that educational movements overlap, grow into one another, and appear again later in modified form.

"To estimate the development of a period one must know first its educational aims, then its content, method of organization and finally the results." This idea should determine the character of study and instruction in this course. According to the plan of the course, a general consideration of the whole field of the history of education is required each year and also a special study of some limited portion of it. The following special topics are announced:

1909–10 Greek education
1910–11 Christian education to the period of the Renaissance
1911–12 The Renaissance and humanistic education
1912–13 Comenius and realism
1913–14 Development of the psychological aspects of education
1914–15 The development of modern state systems of education

The first examination containing questions based on a special topic will be given in June 1910. At least one third of the questions will be on the special topic. Within certain limits a choice of questions will be allowed. A detailed syllabus on the special topics will be prepared each year by the Education Department for the use of all students taking an examination based on this course.

Outline

I Eastern nations. Education among eastern nations should receive comparatively little attention. It is suggested that some one nation, for example Egypt or China, be studied as a type and that the others be surveyed rapidly, note being taken of any departure from the standards of the type nation. Class distinctions, the lack of individual development, the restricted ideals, the memory methods, priestly organization and static results characterizing education in eastern countries should be noted.

II Jewish education. Jewish civilization stands midway between eastern and western civilization. It should receive somewhat particular attention.

Outline. Religious and moral aims. Character and means of education, before and after the exile. The family, the school of the prophets, the synagogue, as agencies of religious instruction. Higher education. Elementary education. Compulsory education, A. D. 64. Organization of elementary schools and content of course of study. Education of girls. Methods of instruction. Importance attached to learning a trade. Attention to personal hygiene. Esteem for teachers. Discipline. Limitations of Jewish education. Lasting influence of Jewish education. Present standards and methods

III Greek education. The city state and its influence in shaping education. Influence of Greek religion, art and national games. The Homeric period. Details of the old education. Aim, organization and content of Spartan education. Merits and defects of Spartan education. Athenian education in the old period (B. C. 776 to 480). Kind of schools. Control of schools. Studies pursued. Meaning of the terms music and gymnastics. The effect of comradeship with elders. How physical education in Athens differed from that in Sparta in character and purpose. Athenian education in the new period (B. C. 480 to 338); causes that led to a change; nature of the change. The Sophists — character and effects of their teaching. Extreme individualism; reactionary forces. Socrates — his ideals of human life and his influence on method and content of education. Plato — defects and permanent value of his ideas. Aristotle — his immediate and later influence. Philosophical schools. Rhetorical schools. Greek universities. Area of influence of Hellenic culture. Position of women in Sparta and Athens. Individualism restricted to free Greeks

IV Roman education. Roman ideals as expressed in Roman social organization. Characteristic Roman virtues. Practical aim of education. The home, the chief source of education. Method informal, through imitation. Biography or living examples the chief influence. Periods of Roman education. Introduction of Greek influences. Elementary schools. Grammar schools. Schools of rhetoric. Discipline. Method of study. Material equipment of schools. State support under the empire. Decline of education. Educational theorists — Cicero and Quintilian

V Rise of Christianity. In what respects Christianity was a new, educational force in the world. Persecution, growth and final triumph of the Christian sect

VI Christian and pagan ideals compared. With reference to: purpose and content of education; classes of society; family life; education of children; relation of the individual to the state; personal morality

Relation of Stoic and Epicurean ideals to those of Christianity

VII Attitude of early Christians toward pagan learning. Reasons for the rejection of Greek learning, and the extent of such rejection

VIII Early Christian schools. Character and purpose of education. Catechumenal and catechetical schools. Educational leaders — Clement of Alexandria, St Jerome, St Augustine

IX Romano-Hellenic schools. Number and distribution. Noted schools, specially at Alexandria. Teachers and studies. Sophists and rhetoricians. Decline of schools, causes. Edict of Justinian A. D. 529.

X Monastic education. The educational importance of monastic orders, especially of the Benedictines. The later Dominican and Franciscan orders. Asceticism. Provisions for study in the monasteries. Little demand for schools outside of the church. Late appearance of schools even in monasteries. Wide distribution of monasteries. Names and locations of the most important. Making, collecting and preserving manuscripts; other educational benefits

XI Medieval schools. Monastery — interior and exterior. Episcopal, or cathedral. Parish, or village. Control, studies, character of instruction, classes of pupils, discipline in each

XII The revival of learning under Charlemagne. Charlemagne — his character and work: better training of monks and clergy, spread of schools, use of vernacular, call of learned men; the palace school — its character, purposes, pupils, subjects of instruction

Alcuin — state of learning found by him, work and influence, lasting benefit in improved copying of manuscripts

XIII Scholasticism. A type or method of individual activity. The cause of this activity. The essential content of all discussion. Great schoolmen, specially Abelard. Educational value of scholasticism

XIV Character and extent of Saracenic influence

XV The universities. Discussion of: origin; organization and control; faculties; privileges; discipline; relation to communities where they existed; method and content of studies; influence; Salerno, Bologna and Paris as types of universities

XVI Ideals and influence of chivalry

XVII The seven liberal arts. The trivium and quadrivium — their development among the Greeks, the Romans and the scholars of the middle ages

XVIII The Renaissance. Forces leading to the revival of learning. The meaning of humanism. Comparison of the character of humanistic movement in Italy with that beyond the Alps. Erasmus and other humanists. The later, narrower humanistic education. The long survival of the humanistic conception of education

Types of humanistic schools: the gymnasia of Germany; influence of Sturm

English public schools like Eaton and Rugby; influence of Colet, Ascham

Jesuit schools

The colonial grammar schools of America

XIX Reformation and the counter reformation. Religion as the chief aim of education during this period

How the Reformation and the humanistic movement were related. The influence of Luther on education. The effect of his translation of the Bible on educational progress. Luther's letters to the German cities. The special claims for history and music. The beginnings of state instead of church support and control of schools. Introduction of lay teachers and its effects. The changed attitude toward elementary education. The establishment of elementary schools; their development in Germany, Holland, Scotland and the United States. The educational work of Melanchthon; the Saxony school plan

Catholic secondary education. [Loyola] Organization of the Society of Jesus, Jesuit schools; growth and extent of their influence; subject-matter of Jesuit schools; the class of persons for which they were established; preparation of teachers; method of instruction; emulation; the Jesuit system as related to educational progress

Catholic elementary schools. Institute of the Brethren of the Christian schools; La Salle; class teaching and its effect upon the grading of pupils; training of teachers; the first normal school; present work of these schools in the United States

The Port Royal schools (Jansenists); contrasted with the Jesuit schools; reason for brief existence; important educational doctrines advanced

XX Realism — Comenius as its chief exponent. General characteristics of realism; contrasted with humanism. The forerunners of Comenius and the special contributions of each to educational thought and practice: Rabelais, Milton, Montaigne, Ratke, Bacon

Biographical sketch of Comenius

His educational work: his view of the purpose of education and its content; his method; his textbooks compared with earlier ones; organization of schools; writings — *The Great Didactic, The School of Infancy*

XXI Rousseau and education according to nature. The relation of Locke to Rousseau and the conception of natural methods

Important events in the life of Rousseau. The spirit of the times in which he lived. Brief analysis of the *Émile*. Educational doctrines presented, to be developed later by his successors — such as

the importance of interest, education as a process of development, the need of simplifying the educational process and the child as a factor in education. Some of the defects in *Émile,* particularly the withdrawing of the child from his social environment.

Application and development of Rousseau's doctrines by Basedow. The Philanthropinists.

XXII Development of the psychological aspects of education. Pestalozzi, Herbart, Froebel

Pestalozzi: biographical sketch; his work at Neuhof, Stanz, Burgdorf and Yverdon; his literary activity. His contributions to educational progress: how he applied the theories of Comenius and Rousseau; the principle of harmonious development, sense impression, method of instruction, relation of his work to the modern elementary school, his influence on the spirit of the schoolroom.

Herbart: Life and writings. Relation to Pestalozzi. His work in developing a pedagogical method, discussion of this method. Morality as an end of education. Character and extent of Herbart's influence. Many-sided interest, apperception, culture epochs, the formal steps of instruction, correlation — as conceptions formed by Herbart and his followers

Froebel: life and writings. Education as a process of development through self-activity: the importance of play, educational value of hand work, nature study. The kindergarten and the growth of the kindergarten idea, especially in America

XXIII Scientific and psychological aspects of education. Modern demands for efficiency of the individual in meeting the needs of society and effect of these demands on the schools. Democratic ideals. Industrial education. Character as an end of education. Spencer's conception of education — preparation for complete living. The modern conception of complete living

XXIV Development of modern state systems of education. In each of the leading European countries

In the United States: growth of free school idea; Horace Mann and his influence on school organization; normal schools; the work of such educators as Henry Barnard, David Page, William T. Harris, Francis W. Parker, E. A. Sheldon and Mary Lyon

In New York State: early Dutch schools; development of the elementary common schools; rise of the academy; growth and influence of the public high school; provisions for the training of teachers; state supervision of schools

Reference books

In preparing examinations in this subject it will be assumed that the teacher, and to some extent the student, has used in addition to the textbooks in common use, such as Compayre's, Kemp's and Seeley's, such reference books as the following:

General

Davidson. A History of Education.
Monroe. A Text Book in the History of Education.

Ancient

Graves. A History of Education before the Middle Ages.
Laurie. Historical Survey of Pre-Christian Education.

Medieval

Laurie. The Rise and Early Constitution of Universities with a Survey of Medieval Education.
Williams. The History of Medieval Education.

Modern

Hoyt. Studies in History of Modern Education.
Monroe. The Educational Ideal, an Outline of its Growth in Modern Times.
Quick. Essays on Educational Reformers.

Education in the United States

Dexter. History of Education in the United States.
Hinsdale. Horace Mann and the Common School Revival in the United States.
Winship. Great American Educators with Chapters on American Education.

Cubberley's *Syllabus of Lectures on the History of Education with Selected Bibliographies and Suggestive Reading* will prove very helpful to training classes and the general reader.

More specific references will be given on the special topics when the special syllabuses are issued.

PHYSIOLOGY AND HYGIENE

In presenting the subject of physiology and hygiene, the aim is to promote good health and thereby insure strong bodies capable of efficient service and enjoyment of life. Hence, the teacher needs to emphasize all points bearing on nourishment, care and protection of the body, particularly to instil in the minds of pupils the importance of proper and regular habits of eating, drinking and excreting.

He should seek the cooperation of parents, especially in cases of children who have formed wrong habits. He should also report to parents all cases of poor eyesight, hearing and other physical defects that may be remedied, to the end that boys and girls may grow to maturity, vigorous and well formed.

This outline is arranged to cover the same topics in the same manner as in the Elementary Syllabus. However, the time for the work here is so brief that it is not possible to consider all the details but only the important features, which should be emphasized.

A careful consideration of the outline will show that it aims to be consecutive, progressive and constructive throughout the several grades.

I The body

Primary

1 Composition: flesh, bones, blood
2 Functions: moving, breathing, eating and excreting
3 Parts: trunk, arms, legs, stomach, mouth, teeth, lungs, skin, brain, eyes, ears; location and use of each
4 Needs: good food; pure air; pure water
5 Hygiene: eating slowly; chewing thoroughly; care of teeth; care in habits of excretion; cleanliness of hands, face and all parts of the body; frequent bathing; danger from dust; proper clothing; dry clothing; correct position of the body in walking, standing and sitting

Intermediate

1 Review topics for primary grades
2 Structure: cells; tissues; organs
3 Uses of bones, flesh, blood, muscles, joints and tendons
4 Needs: food; pure air and water; exercise and rest
5 Composition of tissues: water, proteids, fat and mineral matter, all supplied by food

Grammar

1 Review topics for primary and intermediate grades
2 Names and functions of the principal bones and muscles; advantages of strong muscles in work and play; tendons and their use; changes in bones as age advances
3 Adaptation of structure to function, e. g. molar teeth; shoulder joint

The human body a living machine

II Foods

Primary

1 Needs for growth and repair; hunger and its cause; cooking; thorough chewing
2 Dangers: overeating; eating at irregular times; washing down food
3 Food specially good for children

Intermediate

1 Review topics for primary grades
2 Composition and uses: water, proteid, starch, sugar, fat and mineral matter
3 Hygienic preparation and preservation: meats, soup, canned goods, etc.
4 Necessity for a mixed diet: foods suitable for breakfast, for luncheon, for dinner

Grammar

1 Review topics for primary and intermediate grades, and add more detail with reference to the use of nutrients
2 Experiments to test the presence of the various nutrients in foods

III Digestion

Primary

1 Meaning: work of the teeth, mouth and stomach; necessity of getting food into a liquid form; passage of liquid food through the lining of the digestive tube into the blood
2 Digestive fluids: saliva and its use, names of other digestive fluids
3 Care of the teeth

Intermediate

1 Review topics for primary grades
2 Alimentary canal and digestive fluids: saliva, gastric juice, pancreatic juice, intestinal juice and bile; the uses of each
3 Muscles of the stomach and intestines — their action
4 Absorption and assimilation

Grammar

1 Review topics for primary and intermediate grades with fuller discussion of each

2 Experiments to illustrate osmosis and the digestion of foods
3 Adaptation of structure to function in the parts of the alimentary canal

IV Respiration

Primary

1 Organs of breathing: nose, lungs and windpipe
2 Hygiene: best position for breathing; value of deep breathing; harm from tight clothing; dangers from dust; dangers from mouth breathing; need of proper temperature in the room — use of thermometer

Intermediate

1 Review topics for primary grades
2 Organs of breathing more carefully studied; air cells and their functions; change of air in the lungs; oxidation
3 Hygiene: ventilation of rooms; sweeping and dusting; need of moisture, specially in rooms heated by furnace or stoves; danger from use of gas stoves and other stoves without pipes; value of sunlight

Grammar

1 Review topics for primary and intermediate grades, studying them more in detail
2 Experiments to show the nature of oxidation
3 Hygiene: formation of habits of breathing to secure greater lung power; proper methods of ventilating, sweeping and dusting

V The blood and its circulation

Primary

1 Its use in carrying food and air to all parts of the body
2 The heart — simple description
3 The pulse — effect of exercise

Intermediate

1 Review topics for primary grades
2 Blood, arterial and venous compared
3 Organs of circulation: heart, arteries, veins, capillaries
4 Circulation: pulmonary and systemic; significance of the pulse
5 Composition of the blood

Grammar

1 Review topics for primary and intermediate grades with study more in detail
2 Corpuscles, red and white; the function of each
3 The lymph and lymphatic circulation
4 Experiments to show variations of pulse caused by exercise
5 Temperature — when normal; the use of the clinical thermometer

VI Excretion

Primary

1 Need of drinking plenty of water
2 Excretion through the skin; necessity for bathing; use of soap
3 Excretion by the bowels and kidneys; necessity of frequent movements to get rid of the waste matter
4 Toilet rooms: necessity for cleanliness; false modesty in asking direction to a toilet room

Intermediate

1 Review topics for primary grades
2 Skin and kidneys: their structure; value of hot and cold baths
3 Bladder: its location; danger of retention of urine

Grammar

1 Review topics for primary and intermediate grades
2 Skin and kidneys: adaptation of structure to function
3 Water, its free use a preventive of disease

VII Nervous system

Primary

1 Sensation, its importance
2 Brain and spinal cord, their location
3 Nervous system compared with a telegraph system
4 Hygiene: necessity of food, fresh air, sleep and rest

Intermediate

1 Review topics for primary grades
2 Brain and spinal cord — their functions briefly discussed
3 How the brain and spinal cord are protected from injury

Grammar

1 Review topics for primary and intermediate grades with more attention to detail

2 The brain and other nerve centers; sensory and motor regions
3 Sympathetic system and reflex action
4 The brain and mind growth

VIII Special senses

Primary

1 The five ways of getting information
2 Hygiene: care of the eyes, ears and nose; how these are injured; how they are protected; need of calling a specialist; care and culture of the voice

Intermediate

1 Review topics for primary grades
2 The eye and the ear — the parts and the functions of each
3 Diseases: nearsightedness, farsightedness, cross-eye and astigmatism briefly discussed
4 Vocal cords — their structure; change of voice in boys, need of special care of voice at that time; advantages of a good voice

Grammar

1 Review topics for primary and intermediate grades with more attention to details
2 Models — their use; sheep's eye and brain used for illustration
3 Acuteness of senses — how cultivated

IX Narcotics

Primary

1 Danger from using alcoholic drinks, tobacco, tea, coffee and soda water
2 Danger from the cigarette habit

Intermediate

1 Review topics for primary grades
2 Discuss more fully the effects of narcotics and stimulants on the organs of the body and their functions
3 Total abstinence — its value

Grammar

1 Review topics for primary and intermediate grades
2 The insidious growth of the habit of using narcotics and stimulants

X Protection of life

Primary

1 Contagious diseases: common contagious diseases; bacteria; need for quarantine; dangers from common drinking cup, from putting pencils in the mouth; vaccination
2 Consumption: its origin, prevalence, preventive measures; street expectoration
3 Need for cleanliness: yards and streets; dangers from dust; importance of personal cleanliness
4 Cuts, bruises and burns, how treated; danger from slight wounds from nails, knives and from Fourth of July celebrations
5 Poisonous plants
6 Electric wires
7 Escaping gas
8 Rest and exercise: need of out-door exercise and sleep; desirability of boys and girls knowing how to swim

Intermediate

1 Review topics for primary grades
2 Emergencies: how to stop bleeding from an artery and from a vein; production of artificial respiration in cases of asphyxiation
3 Exercise: value of games, walking, riding, skating etc.

Grammar

1 Review topics for primary and grammar grades with more attention to detail
2 Bacteria: their nature and relation to disease
3 Insects and animals that carry disease
4 Sanitation: health officers and their duties; removal of garbage, public movements to prevent the spread of tuberculosis; importance of good water system and good sewage system to a community; parks, playgrounds and baths in cities

Methods

In the primary grades all lessons should be oral and should not exceed 10 minutes.

In the intermediate grades an elementary textbook must be used. Illustrate structure as far as possible from the pupil's body. Demonstrations of osmosis and tests for nutrients may be performed by the teacher.

In the seventh and eighth grades a more advanced textbook should be used. Models, also parts of a sheep as the lungs, eye, brain, should be employed to show structure. Experiments to show osmosis etc. and tests for nutrients should be made by the pupils.

The law in regard to teaching the effects of alcohol, narcotics etc. should be carefully observed by giving the number of lessons required for the different grades. Small grades may be combine

READING

Reading is the beginning of formal education; it is fundamental to the studies of the elementary school, since it is the means of acquiring subsequent knowledge.

Whatever may be the future of the child, he must be taught to read well, otherwise interest in his studies will begin to fail by the time he has finished half of his elementary course. Many pupils in intermediate and grammar grades are considered stupid and unresponsive because they have not been taught to read. The mind of the child of 10 or 12 is not nourished, simply because he has only the 8 year old child's capability of getting knowledge through reading. His imagination is not stirred, his ambition is unaroused. Getting useful information or the thought of a beautiful story is for him too hard a task.

From the first, teachers of training classes should endeavor to impress the fact that the teaching of reading demands resource, variety and patience.

During the first two years, the teacher should have each recitation planned in advance just as carefully as in any other part of the course. She should have an inexhaustible wealth of device ready for use and aim to secure the quickest possible response.

Words should be constantly reviewed and instant recognition should be required. Expression should be secured the first time that children read words forming a sentence.

A pupil in the first year should be taught to read whole sentences fluently and with correct expression. If he begins to hesitate he should not be allowed to continue. Fluent reading of short sentences may be secured by requiring the child to read a sentence to himself and then to give it without looking at his book. However, looking off the book is not necessary.

The same result can well be secured, together with the additional advantage of increasing the quickness of recognition in the fol-

lowing manner: Write a sentence on the board and after giving the children time to prepare the sentence silently, erase it, then require some child to give the sentence orally with the proper expression.

A good drill to secure rapid recognition of words as well as good expression is to place a list of words on the board. While the pupils watch silently, the teacher points quickly in succession to several words that make a sentence. When she has finished some pupil is required to give the sentence with expression. Pupils may themselves in turn point to words that make a sentence and call on others to read the sentence made. Children should rarely be told words when they are called on to read, but new words should be taught in advance of the reading.

Members of training classes need to be warned that instruction in reading should continue throughout the course. Too often recitations in the fourth and higher grades are merely perfunctory periods of "word naming."

The teacher should take advantage of the child's power of imitation. She should prepare carefully model exercises in expression and read them to her pupils for imitation. Exaggerated expression will do no harm in the lower grades.

After the pupil leaves school, his reading will be almost entirely silent, therefore much practice in silent reading should be given in both the intermediate and grammar grades. The relation existing between the rate of reading and the ability to interpret should also be kept in mind.

In the upper grades emphasis should be placed on appreciative reading. In programs of the seventh and eighth years reading of wide and varied range should be accorded a prominent place. Supplementary reading in connection with history, geography and physiology should not take the place of regular instruction.

Teachers of training classes may well devote attention to common faults in reading. Model recitations should be carefully planned to illustrate all phases of the work.

I Methods of teaching primary reading

1 Alphabetic method
2 Word method
3 Sentence method
4 Phonic method
5 Various combinations of these methods
6 The theory and purpose of each method
7 Advantages and disadvantages of each method

II The teaching of primary reading
- 1 The aim
- 2 The teaching of words
  - *a* objective teaching of words and the steps in the process
  - *b* the teaching of simple sounds — phonograms
  - *c* sight words and blend words
  - *d* the use of perception cards and other devices to secure immediate recognition of words
  - *e* number of sight words that an average class should know at the end of 10 weeks; at the end of the first term; at the end of the first year
  - *f* the use of the blackboard explained; the use of the reader; relative advantages of each
  - *g* sight reading
- 3 The teaching of expression
  - *a* the nature of good expression
  - *b* its importance in reading
  - *c* devices for securing good expression
  - *d* the importance of emphasis and inflection
  - *e* imitation
  - *f* dramatization
- 4 Common faults in primary reading and their correction
- 5 The amount of reading that can be well done during the first year; the second year
- 6 Reading by the teacher — its purpose
- 7 The purpose and danger of the use of pictures in reading books
- 8 The hygiene of reading
  - *a* position of the body and holding of the book
  - *b* eye fatigue — how prevented: size of type; glazing and color of paper; arrangement of page

III The teaching of intermediate reading
- 1 The aim
- 2 The sources of the material for reading
- 3 The teacher's preparation of the lesson
- 4 The pupil's preparation of the lesson
- 5 Reading aloud and reading silently; the importance of each and its relative value
- 6 Thought getting — interpretation of what is read — "inner speech"
- 7 The connection between good reading and knowing how to study

8 Devices for securing interpretation of oral and silent reading
9 Rates of reading
  a the purpose of the different rates in oral reading
  b comparative ability of fast and slow readers to interpret when they read orally; silently
  c the effect of lip movement on rate of silent reading
10 Desirable habits in oral reading
  a correct position
  b the ability to "look ahead"
  c the ability to look up at times
  d other habits
11 Common faults in intermediate reading and their correction
12 Diacritical markings
  a their names, and the modification of sound produced by their use
  b the practical value of such markings
  c syllabification — practice in marking words of moderate length
  d accent — drill in marking
  e the use of the dictionary — when begun
  f drill in the use of the dictionary
13 The amount of reading desirable in each of the intermediate grades
14 Reading by the teacher — its purpose
15 Dramatization

IV The teaching of reading in the grammar grades

1 The purpose
2 Appreciative reading; suitable selections
3 The teacher's preparation; the pupil's preparation
4 Speed drills with reference to interpretation
5 The amount of reading desirable
6 The story of the derivation of the language
7 Word study: common prefixes, roots and suffixes; separation of words into prefix, root and suffix; precautions
8 Synonyms
  a method and extent of study
  b some common synonyms
9 Common faults in the grammar grades, their causes and cure

V The meaning of the following topics of general application and methods of teaching each

1 Emphasis
2 Force and stress
3 Pitch
4 Cadence
5 Tone — kinds
6 Phrasing
7 Correct breathing — its relation to good oral reading
8 Pauses — kinds
9 Articulation
10 Enunciation
11 Inflection

NOTE. Pupil teachers should have practice in marking selections of prose and poetry for phrasing, inflection and emphasis; and should learn by application to various selections the effects of rate, pitch, tone and force.

VI Supplementary reading

1 Distinction between basal and supplementary reading
2 Purposes of each
3 Sources of supplementary reading for (*a*) primary grades, (*b*) intermediate grades, (*c*) grammar grades
4 Reasons for differences in sources in different years
5 Comparative value of using basal reader and other books for supplementary reading
6 Amount of supplementary reading desirable in each part of the course
7 Names of books suitable for supplementary reading in each year [*see* Elementary Syllabus]

VII Grade libraries

1 The use and purposes of grade libraries
2 Their relation to the general school library
3 The responsibility of the teacher in the care of the library; special duties involved
4 Devices for getting pupils interested in grade libraries
5 Suitable library books for each of the elementary grades
6 Desirable reference books in each of the upper grades (*a*) for the teacher, (*b*) for the pupils
7 Traveling libraries and how they may be obtained

VIII Memory selections

1 Their purpose and extent
2 Methods of memorizing
3 Common errors in manner of oral reproduction
4 Extent to which work of previous years should be reviewed
5 Suitable selections for each year of the elementary course [*see* Elementary Syllabus]

SPELLING

Training class teachers should bring to the attention of students common mistakes made in the teaching of spelling. Much poor spelling is due to the fact that teachers assign too many words to be learned. Too often the words learned mean nothing to the child, and the pupils are not required to use the words in any kind of written work. The rule to be impressed should be: "No lesson so long that it can not be learned perfectly by the class."

Written and oral spelling

The advantages and disadvantages of each
The purpose of combining the two. Relative importance

Spelling in primary grades

1 Method of teaching spelling to beginners. Reason
2 Relation of phonics to spelling
3 Pronunciation of the word. When and why?
4 Visualization. Its meaning and purpose
5 Method of teaching the spelling of homonyms
6 Length of the lesson in each grade
7 Devices to secure interest in spelling
8 Mistakes to be avoided

Spelling in intermediate and in grammar grades

1 The length of the lesson
2 The preparation of the lesson
3 Pronouncing syllables
4 Dictation
5 Rules — their value and limitation
Rules that should be learned and applied
6 Poor spelling — its causes and remedies

NOTE. In cases of abnormally poor spellers the teacher should seek the explanation of defects in sight, hearing or organs of speech.

AMERICAN HISTORY AND CIVICS

The requirements for entrance to training classes demand that students shall have successfully completed the study of elementary United States history with civics. It is essential that training class history should be something more than a review of what has previously been studied, for a leader should be able to look over the heads of those led. In general scope, then, the history taught in the training class must resemble the course of American history with civics that is outlined for the high school seniors; yet it should be less insistent for details on the one hand, and on the other, it should definitely emphasize the topics, methods, aids and limitations that are most important in teaching elementary history. It is of prime importance at the outset that students should not feel that all history began with the discovery of America. If any members of the training class have never had an opportunity to study ancient and English history, the training class teacher will reveal to them their poverty rather than conceal it; will encourage them to read and to own some recent handbook of European history; will make frequent use of questions and references regarding European history and of general topics of world-wide and present-day interest.

Notebooks may be used to great advantage and, whatever else of notebook work is demanded, a series of outline maps properly filled in should be required.

Many teachers will wish their classes to be supplied with textbooks. Teachers who have tried and can use successfully the topical method of presenting history will do well to continue it; but, whether a prescribed textbook is used or not, a small collection of reference books should be at all times accessible. Such a collection would contain as a minimum five or six recent textbooks of United States history and civil government, one or more textbooks of modern history such as West's, Robinson's, Harding's or Adams's; such books of reference as Elson's *History of the United States,* Hart's *Source Readers,* Hart's *Actual Government,* the more important books recommended for use with the Elementary Syllabus and 12 or more copies of the Elementary and Training Class Syllabuses.

As the class progresses, it will be helpful to compare the material and treatment of a given period in the Elementary Syllabus with the material and treatment of the same period in the Training Class Syllabus.

I **Geographic features of the United States**

Map work: a relief map colored to show (*a*) the Atlantic coastal plain, (*b*) the Appalachian mountains, (*c*) the Hudson and the St Lawrence waterways, (*d*) the Mississippi basin with important waterways, (*e*) the Rocky mountain highland with the Rocky mountain, Sierra Nevada and Coast ranges, (*f*) the waterways of the Pacific coast and their valleys

1 Geographic conditions that favored the settlement of the Atlantic coastal plain: nearness to Europe; fertility of soil; abundance of harbors and navigable streams

2 Conditions that hindered settlement: climatic difficulties, severity of summer heat and winter cold as compared with temperature on the west coast of Europe; density of forests; malarial and other fevers; remoteness from home lands

3 Reasons why settlements were made on the coast or along tide water rivers

4 The Mississippi basin: extent; fertility; adaptability to variety of crops; capacity for supporting great population

5 The Rocky mountain plateau: comparative aridity; a natural barrier between the Mississippi and the Pacific; its fertility under irrigation

6 The Pacific coast: its scarcity of harbors; dryness of climate in the south; differences in temperature for the same latitudes on the Atlantic and Pacific coasts; irrigation farming

II **Fifteenth century commerce**

Map work: a map of Europe, the Mediterranean basin and western Asia showing Constantinople, Venice, Genoa, Marseilles, Lisbon, Paris, Hamburg, London, Brussels and medieval trade routes

1 The trade of Europe with the East; articles exported; articles imported

2 The capture of Constantinople by the Turks in 1453; how it affected European commerce

3 The search for new routes to the Indies: the ideas of some ancient Greeks and Romans regarding the shape of the earth; prevailing ignorance and superstition regarding geography in the 15th century

4 Inventions or discoveries that aided sailors: printing; sailing to windward; the compass; the astrolabe; the sea chart

Map work: Mercator's map showing voyages of Columbus, Cabot, DeGama, Magellan, Drake, with dates

5 The mistake of Columbus in regard to the nature of his discovery; Americus Vespucius and the naming of America; mistaken notions about the width of the continent; attempts to find a passage through the continent leads to explorations by Cartier, John Smith, Henry Hudson and others

6 The conquests of Mexico and Peru and the wealth they brought to Spain; Spain's place among the nations of Europe; Spain's rivals, France, England and Holland; the Spanish Armada; England's triumph

III Settlements

1 Present causes of emigration from Europe. Causes of emigration in 17th century

2 Virginia a typical southern colony; reasons for early failures in Virginia; reasons for later successes; the labor question; indentured white servants and negro slaves; tobacco growing; plantation life; representative government; quarrels between assemblies and governors; a typical royal colony

3 Massachusetts a typical New England colony: Pilgrim and Puritan, character and aims of each; effect of the political strife in England on the settlement of Massachusetts; the New England town and town meeting; representative government; gainful occupations; offshoots from Massachusetts Bay colony, Providence and Hartford

4 New York, the middle colony: settlement by the Dutch; transfer to the English; first representative assembly; division into 10 counties

5 Other colonies with noteworthy characteristics of each: Pennsylvania, Rhode Island, Maryland, Georgia

Map work: *a* On an outline map of the Atlantic States show in different colors the principal settlements by different nations — 1607–1733

b On an outline map of eastern Massachusetts locate 12 settlements made prior to 1640

c On an outline map of New York locate the principal settlements made in the Hudson and Mohawk valleys prior to 1700

The encyclopedia and atlas will supply the necessary information for the last two maps. Students should note the process of state growth.

IV Government in the colonies prior to the Revolution

1 The nature of the first charters and why they were necessary
2 The necessity for self-government
3 The need for control by the home government
4 Different types of colonies: charter, proprietary, royal; common characteristics; how the power of colonial legislatures grew

V The struggle for the continent

Map work: Show on an outline map in one color the principal French settlements and outposts and in another color the principal English settlements and outposts — 1750

1 Important differences between the French and English colonists: religion; government; mode of life; relations with the Indians
2 Rivalry between France and England in the 18th century
3 Elements of weakness and of strength among the French and among the English
4 Pitt, the war minister of England, and the measures he took to obtain victory
5 The importance of various French fortifications
6 The capture of Quebec and treaty of peace

VI Some steps toward colonial union

1 The New England confederation — 1643
2 The first Colonial Congress — 1690
3 The Albany Congress — 1754
4 The Stamp Act Congress — 1765: cause; how called; acts; results
5 The first Continental Congress — 1774: cause; how summoned; acts; results

VII Colonial life

1 Colonial America a land of farmers: percentage of rural population in census of 1790; the total lack of farm machinery; cities few and small; home industries in New England and the Middle States; plantation industries in the South; traveling artisans

Make lists of all the articles that were formerly made in the home but now are made in the factories.

2 Diversified industries in New England; general farming in the Middle States; staple crops in the South; reasons for these differences

3 Social classes in New England, in the Middle States, and in the South

4 Religious sects: Congregationalists; the Established (Episcopal) Church; Quakers; Baptists; Methodists; Roman Catholics; religious freedom in Rhode Island and Pennsylvania; a state church or religious test for office holding and voting in many states

5 Amusements: in New England; in New York; in the South

6 Travel and communication

Travel: coasting vessels; stage coaches; inns; lack of roads; later development of toll roads and bridges; the carriage of freight

Communication: scarcity of mail matter; infrequency and irregularity of mails; the collection of postage; fewness and poverty of newspapers

VIII The Revolution and the Articles of Confederation

1 Causes of the Revolution

a Underlying causes: taxation by representative bodies a fundamental doctrine in England and America; the American theory of representation as opposed to the English theory and practice; spirit of liberty in the colonies; unjust restrictions on colonial commerce and manufactures

b Immediate causes: the Stamp Act; its nature illustrated by reference to the stamp taxes of the Civil and Spanish-American Wars; its purpose; objection to Stamp Act not an objection to taxation by the mother country; its repeal, how

brought about; the Townshend Acts and resistance to them; the Boston Massacre; the Boston Tea Party; the Continental Congress — 1774; its declaration and resolves

2 The second Continental Congress — 1775
First acts and attitude; change of attitude; the Declaration of Independence

3 Formation of state governments, particularly the state government of New York

4 The Articles of Confederation: simply a league of independent colonies without power (*a*) to enforce its legislation; (*b*) to collect taxes; (*c*) to regulate commerce; why the government under the Articles of Confederation was partially successful; why it failed after peace was declared

5 The War of the Revolution
a General purpose of England to occupy the centers of population and enforce the laws

Map work: Map showing the centers of population in 1775

b Campaign around Boston; failure of the British

c Campaign for New York city and the Hudson valley; its partial success; Washington's masterly retreat and generalship; ultimate failure of the British to secure the Hudson-Champlain valley

Map work: Map of New York State showing in different colors the intended and actual movements of the British

d Campaign for the occupation of Philadelphia

e Campaigns in the South: objective points of the French alliance and Yorktown

Map work: *a* Map showing the areas of conflict in the Revolution and the location, with name and date, of the principal battlefields

b Map showing the continent of North America as divided by the peace treaty of 1783, with the ownership and boundaries of the principal divisions

6 The United States after the Revolution until the adoption of the Constitution — 1789
a Weakness of the government: dealings with the army; foreign relations

b Disorders in the states: boundary disputes; trade discriminations; paper money craze

c The Northwest Territory: conflicting claims of Virginia, Massachusetts, Connecticut and New York; cession to the United States; a national territory and its importance; the Ordinance of 1787 and its provisions in regard to religious liberty, slavery and education

IX The Constitution

1 The federal convention

Causes: the three great compromises

2 Adoption of the Constitution; the first 10 amendments or "Bill of Rights"

3 Departments of government established

a The legislative department: the House of Representatives; composition and qualifications and choice of members, special powers; the Senate, composition, qualifications and choice of members, special powers; general powers granted to Congress; general powers denied to Congress; legislative powers denied to states

A chart showing powers granted and powers denied to each house, to Congress, to the states

b Executive department: the president; qualifications, term, manner of election, powers, removal from office

c Judicial department: organization and powers; appointment of justices and judges; terms of office; constitutional provision in regard to salaries

4 Miscellaneous provisions of the Constitution

Persons; states; the public debt; the supremacy of the general government

5 Overlapping powers

Executive and judicial powers conferred on Senate and House; legislative and judicial powers conferred on the president; independence and authority of the judiciary

6 Amendments

Two methods of proposing amendments; two methods of ratifying amendments; the first 10 amendments;

the 11th amendment and its relation to the doctrine of state rights; the 12th amendment and its cause; the main provisions of the 13th, 14th and 15th amendments

7 The elastic clause

For references to this period *see* Academic Syllabus of Civil Government — 1905 edition.

X Political parties

1 The general principles on which the people divided into parties

2 The Federalists in control — 1789–1801

a Organization of Congress, of Cabinet, and of national courts; the speaker of the House; the source of the speaker's great power

b Revenue and finance: the tariff; the excise; the public debts; the national bank

It is quite necessary at this point to discuss some fundamental principles of economics. The following outline will indicate the most important topics:

Fundamental facts in regard to money, currency and banks: distinction between money and wealth; money a measure of values; why gold is preferred by civilized peoples as a standard of values; what gives worth to paper money; abundant currency facilitates exchanges of different forms of wealth, and exchanges of wealth encourages industry; how banks aid in measuring wealth, distributing wealth, preserving wealth; effects on business of the withdrawal of currency from circulation

c Important events during the Federalist control: the Jay treaty; the French Revolution and Citizen Genêt; the X Y Z affair and change of sentiment; the Alien and Sedition Acts; Virginia and Kentucky Resolutions; triumph of Jeffersonian Republicans

3 Jeffersonian Republican or Democratic-Republican party — 1801–17; Federalists in opposition

a The party policy: decentralization; decrease of army and navy; repeal of tax laws; attack on judiciary

b Reversal of Jeffersonian theory in the purchase of Louisiana; the importance of New Orleans and the Louisiana purchase; Lewis-Clark expedition

Map work: Map showing the boundaries of the Louisiana purchase and the route of the Lewis-Clark expedition

c The War of 1812; foreign relations; advent of young Republicans afterward National Republicans and Whigs; failure of peace policy; the Hartford convention and collapse of the Federalist party; industrial changes caused by the war; protective tariff

Map work: On a map of the United States indicate the areas affected by the military operations of the War of 1812

4 Reorganization of parties — 1817–29: new movements; new issues

a Destruction of commerce by the Embargo — 1807 and the War of 1812, resulting in the growth of manufacturing and westward migration

b Inventions aid manufacturing and the westward migration: the cotton gin and its effect in making slavery profitable and in increasing migration from Southern States; canals and steamboats aid migration from New England and the Middle States; the use of steam and inventions of textile machinery encourage factory building in the North

c New issues: demands for a protective tariff and the tariff of 1816; the demand on the national government for public improvements and the Cumberland road; the settlement of Missouri by slaveholders and the Missouri Compromise — 1820

d The purchase of Florida — 1819

e The Monroe Doctrine — 1823

f The beginnings of a national literature

g The popularity of Andrew Jackson; its causes

Map work: Show on a map of the United States the states admitted from 1789–1821 inclusive, the line of the Missouri Compromise and the territory of Florida

5 Democrats and Whigs — 1829–61; the principles for which each party stood

a Jackson: introduction of the "spoils system"; the United States bank; nullification

b Texas; the Mexican War; revival of sectional controversy

c California and its admission as a state; the Fugitive Slave Law — 1850, its enforcement and the results

d The Kansas-Nebraska Act; the repeal of the Missouri Compromise: the Dred Scott Decision and the triumph of the Republican party

6 Republicans and Democrats — 1861–

a Union or disunion; the seceding states

(1) Comparative strength of seceding and union states in 1861; how the North had been aided by immigrations from Ireland and Germany; the progress due to railroads and inventions; the coal and iron industries in Pennsylvania

(2) Opening hostilities: Sumter and Bull Run

(3) The blockade and its effects on Europe and on the South

(4) The Emancipation Proclamation discloses to the world the real issue of the war

(5) Opening the Mississippi and cutting off of the Southwestern States

(6) Gettysburg, the supreme effort of the Confederacy

(7) Cutting off the Gulf States; Sherman's march to the sea

(8) Closing in on Richmond

Map work: Show on a map of the United States (*a*) the free soil states; (*b*) the seven states that first seceded; (*c*) the four states that seceded later; (*d*) the loyal slave-holding states

b The 13th, 14th and 15th amendments

c Reconstruction: the assassination of Lincoln; Johnson's quarrel with Congress; the bitterness of the North; carpetbag government; Klu Klux disorders

d The new South and the race problem: social progress of the negro; why and how the negro is kept out of politics in the South

e Civil service reform: the nature of it; the need for it; how accomplished

f Foreign relations since 1865; the purchase of Alaska and its value; the treaty with Great Britain, 1871, and the Geneva award; the Venezuelan boundary dispute — 1895; annexation of Hawaii; the war with Spain and its resulting accessions of territory; relations with Cuba; the Panama canal; the Hague Conference

g Domestic problems: tariff reform and the triumph of the Democrats in 1884 and in 1892; silver coinage and the split in the Democratic party in 1896; the growth of trusts, corporations and labor unions; government control of corporations and labor unions; the prohibition movement

Map work: On a Mercator's outline map show the accessions of territory since 1865

XI The progress of the 19th century

By the use of histories and encyclopedias, the class should make a list of important inventions, improvements in manner of living and the great industrial changes that occurred from 1800–50; from 1850–1900. A collection of drawings and pictures will greatly aid this work. A topical treatment should be followed. Some suggested lines are as follows: transportation by land; transportation by water; textile industries; agricultural work; communication; iron and steel manufacture; lighting; municipal improvements; building and architecture; printing; school facilities.

XII The unwritten constitution

1 The difference between a written and an unwritten constitution as seen in the history of Great Britain and the United States; the advantages in each case

2 Evidences that an unwritten constitution is developing in the United States; the intended and the real duties of presidential electors; limitation of presidential term to eight years; the Cabinet; legislative committees; powers of the Speaker of the House; the legislative party caucus; nominating conventions

XIII Present government as developed under the Constitution

1 The suffrage and its gradual extension
- *a* Civil and political rights; naturalization; voting
- *b* History of the suffrage
- *c* Woman suffrage

2 Congress at work
- *a* The Speaker of the House
- *b* The Senate and its prerogatives
- *c* Legislative committees and legislative debate; compare House and Senate
- *d* The making of a law

3 The executive department
- *a* The Cabinet; present Cabinet compared with the first Cabinet; appointment and removal of Cabinet officers; general duties of each department of the Cabinet
- *b* President's powers under the Constitution; the president's influence

4 Federal courts
- *a* Classes of courts: Supreme; Circuit Court of Appeals; Circuit Courts; District Courts; Court of Claims
- *b* The jurisdiction of federal courts: cases involving the Constitution; treaties; federal law; different states
- *c* Federal writs: habeas corpus, mandamus, injunction

5 Taxation
- *a* Direct and indirect taxes
- *b* Constitutional limitations on the taxing power of the United States
- *c* Constitutional limitations on the taxing power of the states
- *d* General policy of the United States in regard to direct taxes
- *e* Advantages and dangers of indirect taxation

XIV Present government of New York State

1 Citizens and their rights

2 Voters and voting

3 The Legislature: the Senate, the Assembly; special powers of each branch; restraints on legislation; appropriation bills

4 The executive: qualifications and powers; the veto; administrative offices
5 The judiciary: classes of courts; choice of justices and judges
6 State debts and state credit; local debts and local credit
7 The school system
8 County government
9 State militia
10 Amendments

Additional topics:

Find resemblances between the Constitution of New York State and the federal Constitution.

XV Local government

1 The principal officers of the county: executive, legislative, judicial and the duties of each
2 The principal officers of the town and the duties of each
3 The city charter: whence obtained; why needed; the principal officers of a city and the duty of each

In the nature of the case no definite syllabus can be made for the proper study of local history or local civics, yet neither should be neglected. In all cases the local school government should be studied at close range. The school commissioner may be invited to give an account of his duties and explain the ordinary steps by which elective public office is obtained. Arrangements may be made with a justice of the peace to visit his court and with the town clerk to visit his office and inspect the records. Excursions to the county courthouse and other county buildings, to the county clerk's and surrogate's office are also valuable. Polling places may be visited on some election day. Printed ballots, election notices, calls for primaries, assessors tax lists and tax receipts should be examined. The local newspaper should be read by some member of the class every week to obtain civic information, while in like manner daily search in some metropolitan newspaper should be made for topics of state and national interest.

If the training class is located in or near a city, the city government should be studied with sufficient detail to give definiteness and reality to textbook ideas.

XVI Methods

1 The purposes of history teaching in the fifth and sixth grades as set forth in the Elementary Syllabus; why tiresome reviews in these grades are uncalled for
2 The progressive method to be followed in preparing pupils for the intelligent use of books
3 Preferred methods of recitation; other methods

4 The difficulties of teaching young children the lives of men of thought
5 Outlining the lives of two or three prominent Americans and discussing the points to be emphasized
6 How the methods employed for the seventh and eighth grades should differ from those employed for the fifth and sixth grades
7 The teaching of local history and civics; the purpose in teaching each
8 The value of studying current events
9 The reasonable correlation of history with other school work
10 Time allotments recommended for the different grades
11 The necessity for the use of maps and the value of map work done by pupils
12 The use of pictures
13 The use of patriotic literature
14 The proper use of dates
15 What finally should be gained from the study of elementary history

SCHOOL LAW

I School districts
1 Kinds of districts
2 Formation, alteration, dissolution

II District meetings
1 Annual: notice, time and place, powers
2 Special: notice, where held, powers

III School buildings and sites
1 Buildings
a Plans and specifications for
b Construction
c Use of school buildings
d Condemnation of buildings
e Sale of buildings
f Repairs
g Outside stairways
h Outbuildings

2 Sites
a When changeable
b How designated
c Sale of
d Condemnation of land for site

IV School district officers
- 1 General provisions
  - *a* Ineligibility
  - *b* Qualifications
  - *c* Terms
  - *d* Change in number of trustees
  - *e* Election
  - *f* Notice of election
  - *g* Refusal to serve
  - *h* Vacancies
  - *i* Morals
- 2 Clerk, treasurer, collector
  - *a* Duties
  - *b* Bonds
  - *c* Provisions relating to such officers in union free school districts
  - *d* Reports
  - *e* Liability
- 3 Trustees
  - *a* General powers and duties
  - *b* Reports
- 4 Board of education
  - *a* General powers and duties
  - *b* Reports

V Town and county officers
- 1 General duties relating to school system
  - *a* Supervisor
  - *b* Town clerk
  - *c* County treasurer

VI School commissioner
- 1 Qualifications
- 2 Election
- 3 Term
- 4 Salary
- 5 Vacancy in office
- 6 General powers and duties

VII Education Department
- 1 Board of Regents
  - *a* Number
  - *b* How chosen
  - *c* Term
  - *d* General powers and duties

2 Commissioner of Education
- *a* How chosen
- *b* Term
- *c* Salary
- *d* General powers and duties
- *e* Power to remove school officers
- *f* Powers in relation to appeals

3 General organization of Department

VIII School taxes
1 How authorized
2 By whom assessed
3 Tax list
4 Property assessed
5 Collection

IX School moneys
1 Kinds of quotas — supervision, district, teachers, academic
2 Conditions on which each quota is apportioned
3 Amount of each quota
4 General method of apportionment of funds for books, pictures, maps and apparatus
5 Withholding moneys

X Compulsory education
1 Required attendance
2 Required instruction
3 Duties of persons in parental relation
4 Unlawful employment of children
5 School records
6 Attendance officer
7 Arrest of truants
8 Truant schools
9 Duty of trustees
10 Penalty for failure to enforce law
11 School register

XI Courses of study
1 Subjects that *must* be included
2 Subjects that *may* be included
3 Authority to adopt
4 Duty of teacher
5 Provisions as to vocal music, drawing, kindergarten, industrial training

6 Physiology and hygiene
a Special instruction required
b Who shall receive instruction
c Textbooks
d Withholding public money

XII Textbooks
1 How adopted
2 How changed
3 Penalty for violating law
4 Supplying indigent pupils
5 Free textbooks

XIII General provisions for the education
1 Of defectives
2 Of Indian children

XIV General provisions for the training of teachers
1 Normal schools
2 Training schools
3 Training classes
4 Teachers institutes
a Attendance of teachers
b Closing school
c Failure to close school
d Failure of teacher to attend
e Payment of teacher

XV Teachers
1 Required age, certification
2 Special qualifications prescribed for cities
3 Kinds of certificates
4 Indorsement of certificates
5 Payment of unqualified teachers
6 Revocation of certificate
a Causes
b Authority — Commissioner of Education, school commissioner
7 Causes sufficient for dismissal
8 By whom employed
9 Contract with relatives
10 Essentials of contract should be written
11 Period of employment
12 When compensation is due
13 Orders on supervisor, collector or treasurer

14 Payment for periods during which school is temporarily closed
15 Verification of records
16 Rules and regulations governing teachers
17 Hours of teaching
18 Closing school
19 Doing janitor work
20 Providing a substitute
21 Authority over pupil
22 Suspension of pupil
23 Expulsion of pupil
24 Infliction of corporal punishment

XVI Nonresident pupils
1 Admission
2 Contracts for their education
3 Transportation
4 Free tuition in high schools

XVII Special statutes
1 Arbor day
2 Flag law
3 Fire drill
4 Holidays

NATURE STUDY AND AGRICULTURE

In nature study and agriculture no separate syllabus is proposed for training classes, but they will use the outline in the Syllabus for Elementary Schools, to which they are referred. There the work is laid out for the five years 1910–15. However the training classes will confine themselves to the outline for the year in which the training class is held and the two succeeding years; but the classes in 1913–14 will prepare on the outlines for 1913–14, 1914–15 and 1910–11, and the classes in 1914–15 will prepare on the outlines for 1914–15, 1910–11 and 1911–12.

DRAWING

Training class students should make themselves familiar with the outline and the material indicated in the Elementary Syllabus.

A review of the principles of drawing is necessary, but practice in the work for grade pupils is the most important feature of this course.

GEOGRAPHY

It has not seemed advisable in the preparation of the following syllabus to outline the work by years. The object of this outline is to indicate the scope of work with which training classes should be made familiar. The order of procedure in actual teaching should follow the Syllabus for Elementary Schools, and the suggestions therein contained should be carefully noted and followed. Training class instruction should have in view at all times the best methods of teaching the topics covered. The planning of work by years and quarters, as well as the preparation of lesson plans, should constitute an important part of the course. A notebook of permanent form should be made by each member of the training class and in it should be placed outlines, suggestions, devices, diagrams, map constructions and other supplementary data and material.

The following outlines suggest the content of the subject as it should be presented to the child. The training class student should go over it from the child's point of view as to content, but from the teacher's point of view as to its presentation in the classroom.

It is well to note the fact that the syllabuses in drawing, nature study, arithmetic and history include topics which are closely related to this work, and these should be considered in outlining the lessons in geography. It is advisable for the student, of course, to know much more of all topics than is here given, but, as has already been said, the outlines suggest the content of the subject for the child.

I Home geography

The mathematical element

1 Directions: north, east, south and west

2 Distance, units and application, using inch, foot, yard, rod, mile

3 Making plots and maps, using a scale and, when possible, proper symbols

- *a* schoolroom
- *b* school grounds
- *c* other pieces of land
- *d* neighboring streets

4 Reading or interpreting plots and maps

- *a* streets and roads
- *b* streams
- *c* important buildings
- *d* other objects and places of interest

The industrial and commercial element

1 Productive industries
   - *a* agriculture: (1) gardening, (2) flower culture, (3) truck raising, (4) farming
   - *b* manufacturing: (1) articles produced at home (2) local industries

2 Commercial occupations, trade
   - *a* the store — kinds, commodities sold
   - *b* the market
   - *c* the agent or vendor

3 Transportation and communication
   - *a* roads
   - *b* railroads
   - *c* rivers and canals
   - *d* the mail
   - *e* the telephone
   - *f* the telegraph

The social element

1 Social agencies
   - *a* schools
   - *b* churches
   - *c* libraries
   - *d* places of entertainment
   - *e* clubs and societies
   - *f* charitable institutions

2 Government
   - *a* home
   - *b* school
   - *c* village and town

The physical element

In connection with the study of home geography land and water forms may be taught, but no attempt should be made to teach processes. Excursions, carefully planned, should be made by teacher and class. In addition to those suggested in the Elementary Syllabus, excursions may be made to the brook, the river, the glen, the mountain, the forest, the park and the fair. *Make the work concrete.*

II The globe

1 Shape

2 Size. The circumference may be reckoned in the length of time it will take to travel around it.

3 Motions
- *a* daily — result explained
- *b* yearly — result explained
- *c* variation of hours of sunlight at different seasons explained
- *d* inclination and parallelism of axis

4 Zones
- *a* names
- *b* boundaries — why so placed
- *c* characteristics

5 Definition of terms: equator, axis, poles, tropics, polar circles, great circles, small circles

6 Latitude and longitude
- *a* explained from seating of schoolroom, from streets of town or city, from globe
- *b* use in fixing location
- *c* the longest parallel, north latitude, south latitude
- *d* the prime meridian, east longitude, west longitude
- *e* how measured
- *f* degrees of latitude about 70 miles in length
- *g* degrees of longitude variable
- *h* use of length of degrees of latitude and longitude in determining distances on maps and on globe

7 Surface
- *a* great land masses: (1) names, (2) location, (3) size, as shown by (*a*) latitude and longitude, (*b*) expressed in length of time it will take to make a journey across it. (4) comparative area of each
- *b* the ocean: (1) divisions and boundaries, (2) comparative areas

8 The hemispheres
- *a* names: northern, southern, eastern, western — (1) center and boundary of each, (2) land areas of each, (3) water areas of each

Relative values and approximate distances are of fundamental importance, but they should always be expressed in units which may be readily understood by the child. That the earth is about 25,000 miles in circumference conveys to the average pupil but a vague idea of its size. However, if the child can be taught to appreciate the size of New York State, simple work in arithmetic will show that a square of paper ⅓ of an inch on each side will cover on a 12 inch globe an area equal to the State of New York.

The resourceful teacher will find many such ways of making concrete illustrations of important statistical statements.

III Grand divisions
- 1 Position
  - *a* in hemispheres
  - *b* in zones
  - *c* in relation to bordering waters
  - *d* in relation to other grand divisions
- 2 Form
  - *a* in general
  - *b* in detail: (1) important projections, (2) important indentations, (3) chief islands adjacent
- 3 Size
  - *a* as compared with other continents
  - *b* as to range of latitude and longitude
- 4 Relief
  - *a* highlands: (1) hills; (2) mountains: ridges, ranges, peaks—(*a*) position, (*b*) extent
  - *b* lowlands: plains—(1) position, (2) extent
- 5 Drainage
  - *a* rivers and lakes described
  - *b* ocean
  - *c* gulf
- 6 Climate, is influenced by
  - *a* latitude
  - *b* prevailing winds
  - *c* relief features, the oceans and their currents
- 7 Products
  - *a* mineral
  - *b* vegetable
  - *c* animal
- 8 Political divisions
  - *a* name
  - *b* location
  - *c* boundaries
  - *d* comparative areas
- 9 Population

IV Political divisions
- 1 Position
  - *a* in grand divisions
  - *b* by boundaries: (1) natural, (2) artificial

NOTE. The location by boundaries is meant to apply to the larger political divisions only.

2 Size
   a approximate area
   b comparative area
3 Relief
   a general slopes
   b principal highlands
   c principal lowlands
4 Drainage
   a important streams
   b lakes
5 Climate of various sections
   a temperature
   b rainfall
   c winds
6 Agricultural products
7 Mineral products
8 People
9 Industries
10 Manufactured products
11 Commercial routes
   a rivers
   b canals
   c railroads
12 Government

In the preceding outline the topics for the study of a political division are given in logical order. Teachers sometimes prefer to approach the study of a state or locality through a consideration of its products, or its occupations and industries. Circumstances will frequently suggest desirable changes in covering an outline of study.

V State of New York

The following outline calls for a more intensive study of our own State than should be given to other states or political divisions:

1 Location
   a latitude and longitude
2 Boundaries
   a natural
   b political
3 Relief
   a highlands
   b lowlands

4 Drainage
   a river systems: (1) St Lawrence to the Atlantic, (2) Ohio-Mississippi to the Gulf of Mexico, (3) Mohawk-Hudson, Delaware and Susquehanna to the Atlantic
   b lake regions: (1) Adirondack, (2) central, (3) western
5 Climate of various sections
6 Mineral products
   a salt
   b stone: (1) Potsdam sandstone, (2) Medina sandstone, (3) limestone, (4) bluestone, (5) marble
   c petroleum
   d iron
   e local mineral products
7 Agricultural products
   a hay, alfalfa
   b dairy products
   c cereals
   d orchard fruits
   e small fruits
   f grapes
   g garden vegetables
   h tobacco
   i hops
   j potatoes
   k lumber
   l minor products
8 Natural advantages
   a New York harbor
   b Hudson river
   c mountain resorts
   d lake and sea resorts
   e water supply for ice and for city use
   f water power
   g natural thoroughfares
   h forests
9 Population
   a native
   b foreign
10 Industries and occupations
   a manufacturing

b commercial
c professional
d agricultural
e minor: lumbering, quarrying stone, brick making, ice cutting

11 Commercial and manufacturing centers
a natural causes that have determined their location
b natural causes that have contributed to their growth

12 Trade routes
a roads
b railroads
c canals
d rivers

13 Social agencies
a schools
b colleges
c libraries
d charitable institutions
e penal institutions

14 Government
a town
b county
c state

New York city should receive comprehensive treatment. Already the second city in size in the world, its unexcelled advantages for growth and commercial supremacy are worthy of study. Note its commanding position at the "gateway of the continent," its extensive water front and harbor facilities, its railroad connections with the interior, its own rapid transit arrangements, its varied manufactures, etc. Make a careful study of maps showing these and other facts worthy of attention.

VI Map drawing
1 Copying
2 Enlarging by dividing the surface into equal rectangles
3 Upon a map base of parallels and meridians constructed according to some projection in general use

VII Map construction
1 Relief maps, such as: sand maps, and putty maps may be used sparingly to test the child's knowledge of areas studied. They should not be used to teach such areas originally on account of the unavoidable exaggeration of the facts of relief, etc.

2 Maps and diagrams for study

The list of such maps and diagrams which might be given is a very long one, and only a few of the more important ones are suggested.

a Physical: (1) relief, (2) drainage, (3) temperature, (4) rainfall, (5) weather, (6) snowfall

b Political and industrial: (1) county and state, (2) distribution of population as to density, (3) distribution of industries

c Diagrams: (1) cross sections showing relief, (2) comparison of areas, (3) comparison of altitudes, (4) comparison of distances

Additional suggestions

It should be impressed upon the mind of the training class student that the subject of geography should be approached, when possible, through the observation, experience and judgment of the pupil. The pupil should be encouraged and helped to make inferences, and as the work progresses there should be a considerable increase in his power to make correct deductions.

In beginning the study of a country, a glance at its range of latitude and longitude should suggest its approximate dimensions in miles; and when this is noted, its area, as compared with some well known unit of size, like the State of New York, is readily determined. When there is added to such knowledge of size the knowledge of a country's position and physical resources, the child has in his possession all of the necessary data for making intelligent inferences.

Those who are preparing to teach should develop skill in rapid map drawing. The teacher who, in two or three minutes, can draw from previous knowledge an outline of some state or country and indicate thereon its natural and artificial boundaries, and its more important physical and political features, has a power which is not difficult to acquire, but which enables him to present a body of information that could not be expressed orally or in writing in a much longer period. There is little to justify the requirement of such map drawing from children except when done upon a printed map base of parallels and meridians. But the teacher should have at hand, or should herself construct maps and charts from which the child through study may acquire a knowledge of the right relation of physical to political features.

Teachers of geography should keep informed concerning such current events as serve to illumine their work. Periodicals should be scanned for articles that deal with cities, countries, explorations, expeditions, travel, commercial and manufacturing enterprises, forest preservation, irrigation, mining, government changes, ways of living and other features that bear directly upon the study of geography. Clippings should be made or summaries written of such articles and these should be preserved for ready reference.

Pictures should be collected and filed. Now that reproduced photographs are generally used for book and periodical illustrations, it follows that such pictures are reliable witnesses. Pupils should be taught so to question a picture as to acquire the facts it portrays, and also to get from it the suggestions arising from close observation. The "story told by the picture" should be given in connected statements.

Care should be exercised in picture study to keep before the class the magnitudes involved, otherwise an accurate photograph may be very misleading. The pupil unaided can not be expected to see in an ordinary picture of the Rock of Gibraltar a mountain nearly 3 miles in length and over 1400 feet high, nor in a picture of the Colosseum a structure containing within its walls acres of space and capable of seating 84,000 people besides providing for a spacious arena.

Collections of specimens of the woods of the locality, its rocks and minerals, many of its agricultural and manufactured products, may be made. At little or no expense this supplementary material can be secured, and when properly used, will add greatly to the efficiency of instruction. Training class students should begin to make such collections for future use.

In every training class an intensive study of some feature or topic should be frequently undertaken, such as England, Paris, Rome, the Nile, Holland, the Panama canal, Mount Vesuvius. Such studies serve a double purpose. They make the students acquainted with the facts as well as the materials available for the study, and also enable them to show how they would plan lessons of a similar sort for children of various ages.

It should be constantly called to the attention of the student that the physical conditions and agencies which determine life and promote civilization constitute the basis upon which must rest all study of geography. Hence, in those grades where these relations can be

appreciated by the pupils, physical environment must always receive first attention. Latitude, the seasons, temperature, precipitation of moisture, prevailing winds, the influence of ocean currents, elevation, proximity of mountains, near or remote bodies of water, navigable waters, water power, forest area, natural thoroughfares and mineral resources are among the features to be considered in the study of any locality or country.

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